

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



In re application of:

Khan *et al.*

Appl. No. 09/783,034

Filed: February 15, 2001

For: **Die-Down Ball Grid Array
Package With Die-Attached Heat
Spreader And Method For
Making The Same**

Confirmation No. 5713

Art Unit: 2826

Examiner: Andujar, Leonardo

Atty. Docket: 1875.0210000

Supplemental Information Disclosure Statement

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Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98.

Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application

does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

- ☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- ☒ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed within three months of the date of filing of a national application other than a continued prosecution application (CPA), OR within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, OR before the mailing date of a first Office Action on the merits OR before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.
- ☐ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
 - ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☐ c. Attached is our PTO-2038 Credit Card Payment Form in the amount of \$180.00 in payment of the fee under 37 C.F.R. § 1.17(p).
- ☐ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Attached is our PTO-2038 Credit Card Payment Form **[OR]** Check No. _____ in the amount of \$ _____ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:
 - ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
 - ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☐ 5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version

of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.

- ☐ 6. A concise explanation of the relevance of the non-English language document(s) appears below:
- ☐ 7. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. _____, filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Jeffrey S. Weaver
Attorney for Applicants
Registration No. 45,608

Date: 11-17-03

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600



FORM PTO-1449

INFORMATION DISCLOSURE STATEMENTATTY. DOCKET NO.
1875.0210000APPLICATION NO.
09/783,034APPLICANT
Khan *et al.*FILING DATE
February 15, 2001GROUP
2826**U.S. PATENT DOCUMENTS**

| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB-CLASS | FILING DATE |
|---------------------|-----|--------------------|------------|---------------------|-------|-----------|-------------|
| | AA1 | 10/284,312 | 3/27/2003 | Zhao <i>et al.</i> | | | 10/31/2002 |
| | AB1 | 10/284,340 | | Zhao <i>et al.</i> | | | 10/31/2002 |
| | AC1 | 10/201,891 | 12/12/2002 | Zhao <i>et al.</i> | | | 7/25/2002 |
| | AD1 | 10/200,336 | 12/12/2002 | Khan <i>et al.</i> | | | 7/23/2002 |
| | AE1 | 10/197,438 | 12/12/2002 | Zhao <i>et al.</i> | | | 7/18/2002 |
| | AF1 | 10/201,309 | 12/19/2002 | Khan <i>et al.</i> | | | 7/24/2002 |
| | AG1 | 10/201,893 | 12/12/2002 | Zhao <i>et al.</i> | | | 7/25/2002 |
| | AH1 | 10/200,255 | 12/19/2002 | Zhao <i>et al.</i> | | | 7/23/2002 |
| | AI1 | 10/101,751 | | Zhao <i>et al.</i> | | | 3/21/2002 |
| | AJ1 | 10/253,600 | | Zhong <i>et al.</i> | | | 9/25/2002 |
| | AK1 | 10/284,371 | 8/7/2003 | Khan <i>et al.</i> | | | 10/31/2002 |

FOREIGN PATENT DOCUMENTS

| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|---------------------|-----|--------------------|------|---------|-------|-----------|-------------|
| | AL1 | | | | | | Yes No |
| | AM1 | | | | | | Yes No |
| | AN1 | | | | | | Yes No |
| | AO1 | | | | | | Yes No |
| | AP1 | | | | | | Yes No |

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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|---------------------|-----|--------------------|------------|----------------------------|-------|-----------|-------------|
| | AA2 | 10/284,349 | 8/7/2003 | Khan <i>et al.</i> | | | 10/31/2002 |
| | AB2 | 10/284,166 | 8/7/2003 | Zhao <i>et al.</i> | | | 10/31/2002 |
| | AC2 | 10/284,366 | 8/7/2003 | Zhao <i>et al.</i> | | | 10/31/2002 |
| | AD2 | 5,173,766 | 12/22/1992 | Long <i>et al.</i> | | | 06/25/1990 |
| | AE2 | 5,216,278 | 6/1/1993 | Lin <i>et al.</i> | | | 03/02/1992 |
| | AF2 | 5,285,352 | 2/8/1994 | Pastore <i>et al.</i> | | | 07/15/1992 |
| | AG2 | 5,552,635 | 9/3/1996 | Kim <i>et al.</i> | | | 1/10/1995 |
| | AH2 | 5,866,949 | 02/02/1999 | Schueller | | | 10/8/1997 |
| | AI2 | 5,949,137 | 09/07/1999 | Domadia <i>et al.</i> | | | 09/26/1997 |
| | AJ2 | 5,986,340 | 11/16/1999 | Mostafazadeh <i>et al.</i> | | | 5/2/1996 |
| | AK2 | 6,084,297 | 7/4/2000 | Brooks <i>et al.</i> | | | 9/3/1998 |

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|---------------------|-----|--------------------|------|---------|-------|-----------|-------------|
| | AL2 | | | | | | Yes No |
| | AM2 | | | | | | Yes No |
| | AN2 | | | | | | Yes No |
| | AO2 | | | | | | Yes No |
| | AP2 | | | | | | Yes No |

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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|---------------------|-----|--------------------|------------|-------------------------|-------|-----------|-------------|
| | AA3 | 6,246,111 B1 | 6/12/2001 | Huang <i>et al.</i> | | | 1/25/2000 |
| | AB3 | 6,288,444 B1 | 9/11/2001 | Abe <i>et al.</i> | | | 6/4/1999 |
| | AC3 | 6,369,455 B1 | 4/9/2002 | Ho <i>et al.</i> | | | 4/7/2000 |
| | AD3 | 6,472,741 B1 | 10/29/2002 | Chen <i>et al.</i> | | | 7/14/2001 |
| | AE3 | 6,525,942 B2 | 2/25/2003 | Huang <i>et al.</i> | | | 5/18/2001 |
| | AF3 | 6,541,832 B2 | 4/1/2003 | Coyle | | | 1/19/2001 |
| | AG3 | 6,545,351 B1 | 4/8/2003 | Jamieson <i>et al.</i> | | | 3/27/2000 |
| | AH3 | US2003/0138613 A1 | 7/24/2003 | Thoman <i>et al.</i> | | | 1/24/2002 |
| | AI3 | 5,065,281 | 11/12/1991 | Hernandez <i>et al.</i> | | | 2/12/1990 |
| | AJ3 | 5,717,252 | 2/10/1998 | Nakashima <i>et al.</i> | | | 12/2/1996 |
| | AK3 | 5,856,911 | 1/5/1999 | Riley | | | 11/12/1996 |

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|---------------------|-----|--------------------|------|---------|-------|-----------|-------------|
| | AL3 | | | | | | Yes No |
| | AM3 | | | | | | Yes No |
| | AN3 | | | | | | Yes No |
| | AO3 | | | | | | Yes No |
| | AP3 | | | | | | Yes No |

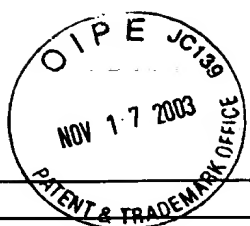
OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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| | AA4 | 6,313,521 B1 | 11/6/2001 | Baba | | | 11/3/1999 |
| | AB4 | 6,462,274 B1 | 10/8/2002 | Shim <i>et al.</i> | | | 10/20/1999 |
| | AC4 | 6,528,892 B2 | 3/4/2003 | Caletka <i>et al.</i> | | | 6/5/2001 |
| | AD4 | 6,563,712 B2 | 5/13/2003 | Akram <i>et al.</i> | | | 5/16/2002 |
| | AE4 | 6,011,694 | 1/4/2000 | Hirakawa | | | 8/1/1997 |
| | AF4 | 5,541,450 | 7/30/1996 | Jones <i>et al.</i> | | | 11/2/1994 |
| | AG4 | 6,583,516 B2 | 6/24/2003 | Hashimoto | | | 11/1/2001 |
| | AH4 | 6,552,266 B2 | 4/22/2003 | Carden <i>et al.</i> | | | 1/26/2001 |
| | AI4 | 6,002,147 | 12/14/1999 | Iovdalsky <i>et al.</i> | | | 9/26/1996 |
| | AJ4 | 6,060,777 | 5/9/2000 | Jamieson <i>et al.</i> | | | 7/21/1998 |
| | AK4 | 5,920,117 | 7/6/1999 | Sono <i>et al.</i> | | | 3/18/1997 |

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|---------------------|-----|--------------------|------|---------|-------|-----------|-------------|
| | AL3 | | | | | | Yes No |
| | AM3 | | | | | | Yes No |
| | AN3 | | | | | | Yes No |
| | AO3 | | | | | | Yes No |
| | AP3 | | | | | | Yes No |

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| | AA5 | 5,650,659 | 7/22/1997 | Mostafazadeh <i>et al.</i> | | | 8/4/1995 |
| | AB5 | 5,977,626 | 11/2/1999 | Wang <i>et al.</i> | | | 8/12/1998 |
| | AC5 | 5,294,826 | 3/15/1994 | Marcantonio <i>et al.</i> | | | 4/16/1993 |
| | AD5 | 6,552,428 B1 | 4/22/2003 | Huang <i>et al.</i> | | | 10/12/1999 |
| | AE5 | 5,208,504 | 05/04/1993 | Parker <i>et al.</i> | | | 12/28/1990 |
| | AF5 | 5,366,589 | 11/22/1994 | Chang | | | 11/16/1993 |
| | AG5 | 5,394,009 | 02/28/1995 | Loo | | | 07/30/1993 |
| | AH5 | 5,433,631 | 07/18/1995 | Beaman <i>et al.</i> | | | 06/29/1994 |
| | AI5 | 5,907,903 | 06/01/1999 | Ameen <i>et al.</i> | | | 01/08/1998 |
| | AJ5 | | | | | | |
| | AK5 | | | | | | |

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